

METHOD AND SYSTEM FOR CONTROL OF A PATIENT'S BODY TEMPERATURE BY WAY OF TRANSLUMINALLY INSERTABLE HEAT EXCHANGE CATHETER

Abstract of the Disclosure

5

Methods and apparatuses for temperature modification of a patient, or selected regions thereof, including an induced state of hypothermia. The temperature modification is accomplished using an in-dwelling heat exchange catheter within which a fluid heat exchange medium circulates. A heat exchange cassette of any one of several disclosed variations is attached to the circulatory flow lines of the catheter, the heat exchange cassette being sized to engage a cavity within one of various described re-usable control units. The control units include a heater/cooler device, a user input device, and a processor connected to receive input from various sensors around the body and the system. The heater/cooler device may be thermoelectric to enable both heating and cooling based on polarity. A temperature control scheme for ramping the body temperature up or down without overshoot is provided. The disposable heat exchange cassettes may include an integral pump head that engages with a pump drive mechanism within the re-usable control unit. More than one control unit may be provided to receive the same heat exchange cassette so that a large capacity control unit can be used initially, and a smaller, battery-powered unit can be substituted once the patient reaches the desired target temperature.